ENVIRONMENTAL SENSOR

Temperature - Humidity - Digital I/O

User manual

INTRODUCTION

Thank you for choosing our product.

The accessories described in this manual are of the highest quality, carefully designed and built to ensure excellent performance.

This manual contains detailed instructions on how to install and use the product.

This manual must be stored in a safe place and CONSULTED BEFORE USING THE DEVICE for proper usage instructions as well as maximum performance from the device itself.

NOTE: Some images contained in this document are for informational purposes only and may not faithfully demonstrate the parts of the product they represent.

SAFETY

This part of the manual contains SAFETY precautions that must be followed scrupulously.

Ensure that the connectors subjected to high voltages are correctly isolated.

- The device has been designed for professional use and is therefore not suitable for use in the home.
- The device has been designed to operate only in closed environments. It should be installed in rooms where there are no inflammable liquids, gas or other harmful substances.
- Take care that no water or liquids and/or foreign bodies fall into the device.
- In the event of a fault and/or impaired operation of the device, do not attempt to repair it but contact the authorized service centre.
- The device must be used exclusively for the purpose for which it was designed. Any other use is to be considered improper and as such dangerous. The manufacturer declines all responsibility for damage caused by improper, wrong and unreasonable use.

ENVIRONMENTAL PROTECTION

Our company devotes abundant resources to analysing environmental aspects in the development of its products. All our products pursue the objectives defined in the environmental management system developed by the company in compliance with applicable standards.
When evaluating packaging, the choice of material has been made favouring recyclable materials.
Please separate the different material of which the packaging is made and dispose of all material in compliance with applicable standards in the country in which the product is used.

DISPOSING OF THE PRODUCT

The device contains internal material which (in case of dismantling/disposal) are considered TOXIC, such as electronic circuit boards. Treat these materials according to the laws in force, contacting qualified centres. Proper disposal contributes to respect for the environment and human health.

© The reproduction of any part of this manual, even in part, is prohibited unless authorised by the manufacturer.
The manufacturer reserves the right to change the product described at any time without prior notice for improvement purposes.

INDEX

PRESENTATION ***4***

TECHNICAL DATA ***4***

INSTALLATION ***5***

CONNECTORS AND DIP-SWITCH ***6***

DIP-SWITCH ***7***

I/O CONNECTOR ***8***

RS 485 DATA BUS CONNECTORS ***8***

RJ12 CABLE SPECIFICATIONS ***8***

EXAMPLES OF TERMINAL BOARDS CONNECTION ***9***

NETMAN 208 CONFIGURATION ***10***

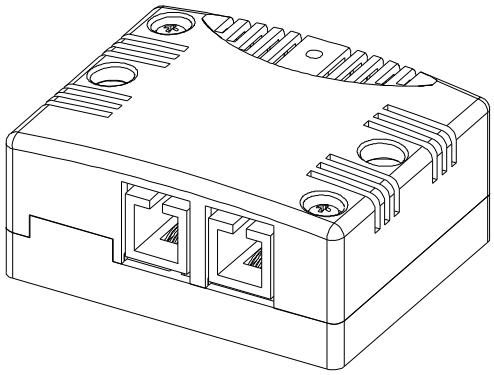
SENSORS DETECTION AND REGISTRATION ***10***

EVENTS CONFIGURATION ***12***

STATUS LED ***14***

PRESENTATION

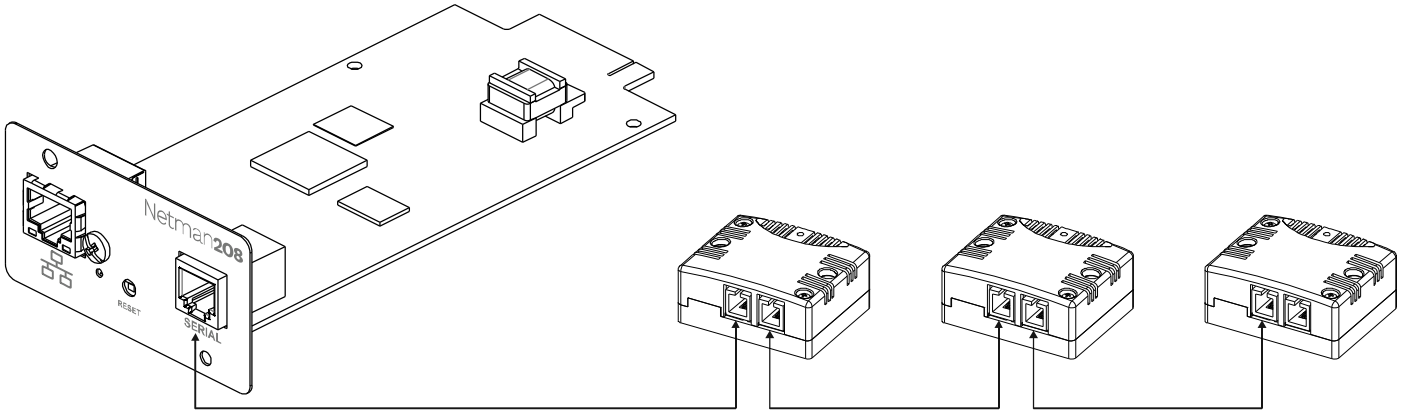
The environmental sensor is a device, compatible with *Netman 208*, that allows you to monitor the temperature and the humidity. The device also manages a digital I/O.



TECHNICAL DATA

Temperature	Range: Resolution:	-20°C / +70°C ±0.5°C
Humidity	Range: Resolution:	0% / 100% ±1.8%
Digital I/O	Output Input	NO and NC Relay - Maximum load 1A / 48V Dry contact

INSTALLATION



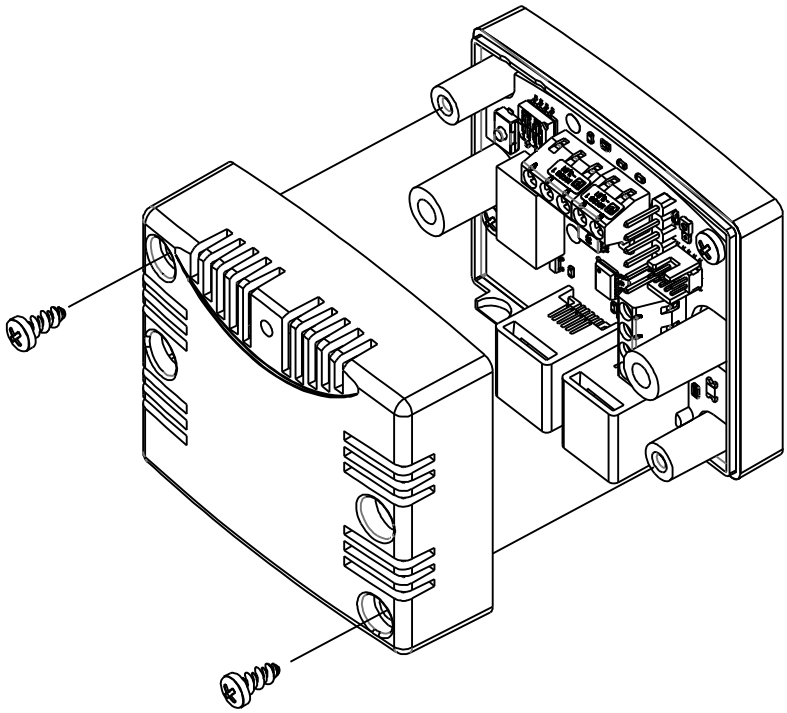
For each *Netman 208* it is possible to connect up to three sensors.
The recommended maximum length for the connection from the *Netman 208* to the last sensor is 50 m.

Each sensor must be assigned an address which are set using the internal DIP-SWITCH.

Connect the sensors using the cables provided with the devices or according to the “RS-485 DATA BUS CONNECTORS” specification table.

CONNECTORS AND DIP-SWITCH

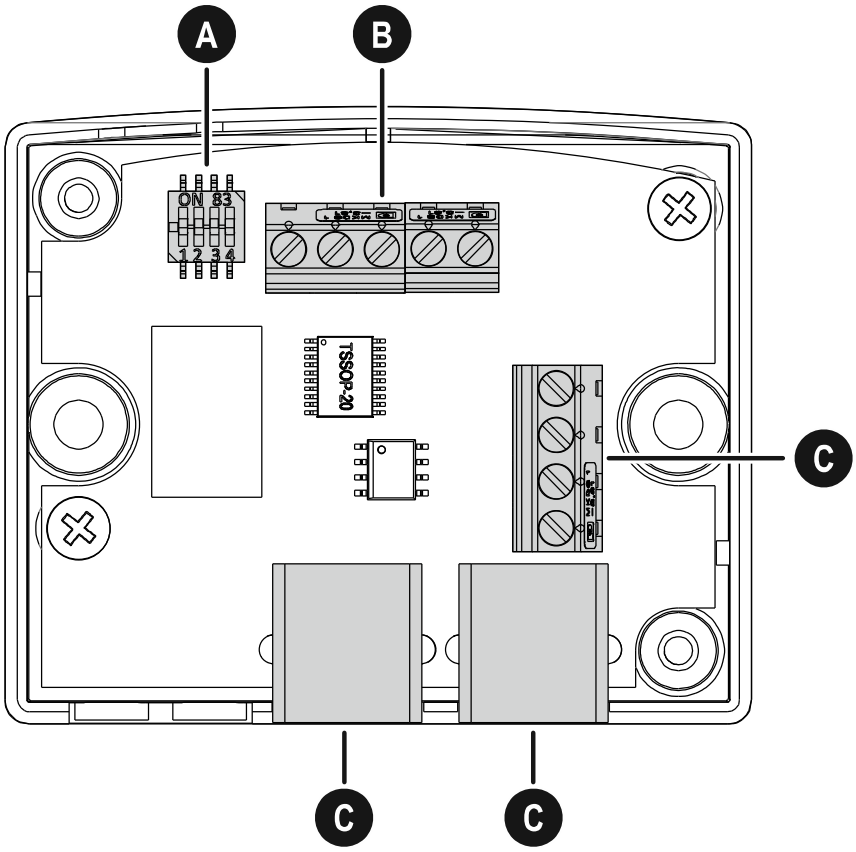
To access to the DIP-SWITCH and the terminal connections, remove the two screws from the top of the sensor.



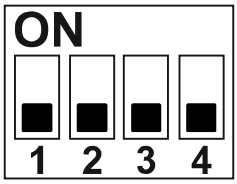
A DIP-SWITCH

B I/O CONNECTOR

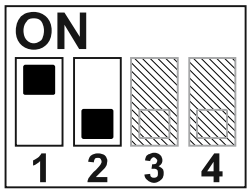
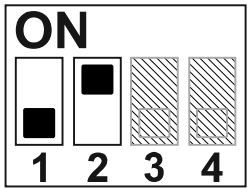
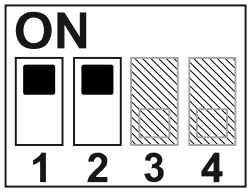
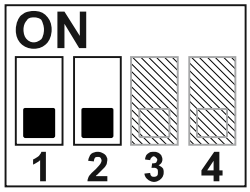
C RS-485 DATA BUS CONNECTORS



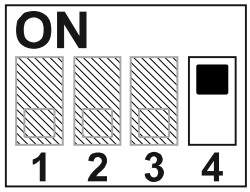
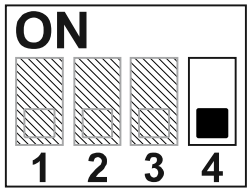
DIP-SWITCH

POSITION	DESCRIPTION	
1 - 2	ADDRESS SETTING	
3	RESERVED Must always be OFF	
4	Termination resistor (Rt=120Ω)	

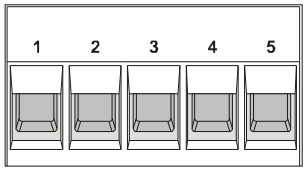
Address number 1, 2 and 3 are allowed. To set the address, act on positions no. 1 and no. 2 according to the following table.

ADDRESS	Position no. 1	Position no. 2	DIP-SWITCH
1	**ON**	**OFF**	
2	**OFF**	**ON**	
3	**ON**	**ON**	
RESERVED	**OFF**	**OFF**	

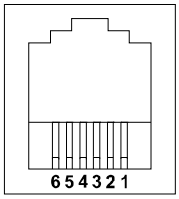
The device is supplied with an embedded termination resistor for the RS485 bus (Rt=120Ω).
To insert the resistor, set the position no. 4 as per the table below:

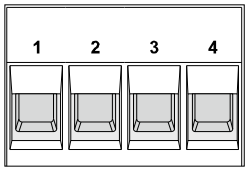
TERMINATION RESISTOR	Position no. 4	DIP-SWITCH
INSERTED	**ON**	
NOT INSERTED	**OFF**	

I/O CONNECTOR

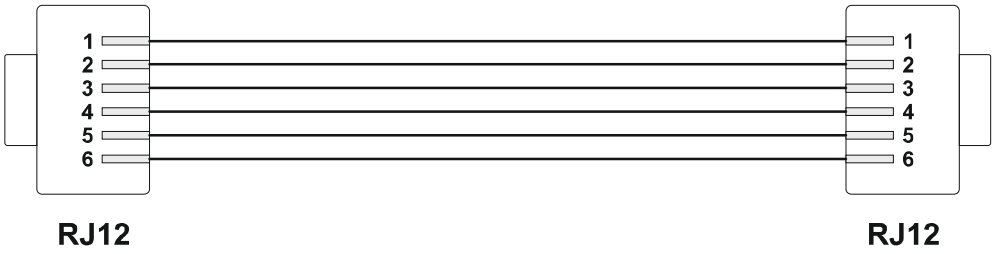
POSITION	DESCRIPTION		TERMINAL BOARD
1	**NC**	NORMALLY CLOSED	
2	**C**	COMMON	
3	**NO**	NORMALLY OPEN	
4	**IN**	DRY CONTACT	
5	**GND**		

RS 485 DATA BUS CONNECTORS

POSITION	DESCRIPTION	RJ12
1	**+5V**	
2	**GND**	
3	**-**	
4	**-**	
5	**RS485 A**	
6	**RS485 B**	

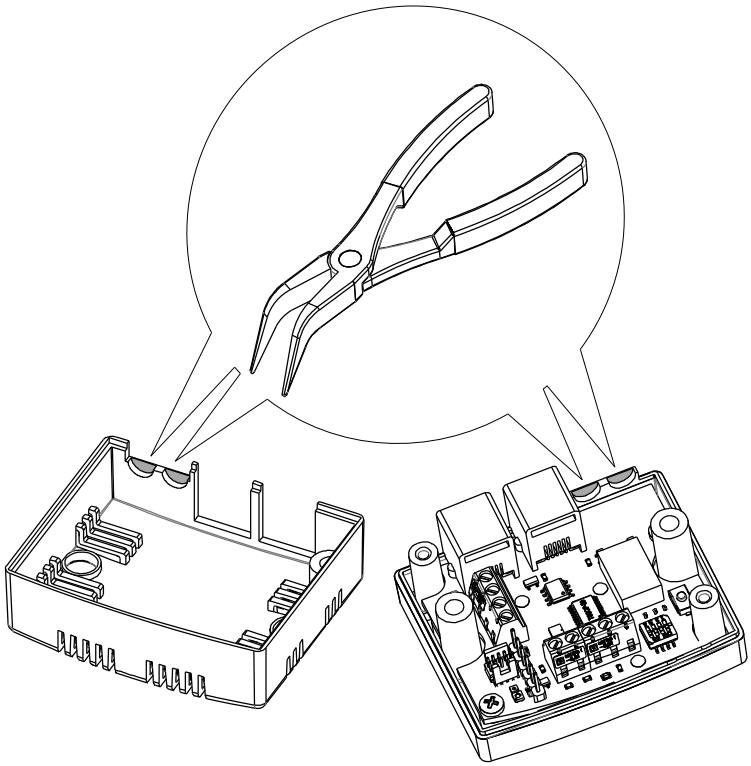
POSITION	DESCRIPTION	TERMINAL BOARD
1	**+5V**	
2	**RS485 A**	
3	**RS485 B**	
4	**GND**	

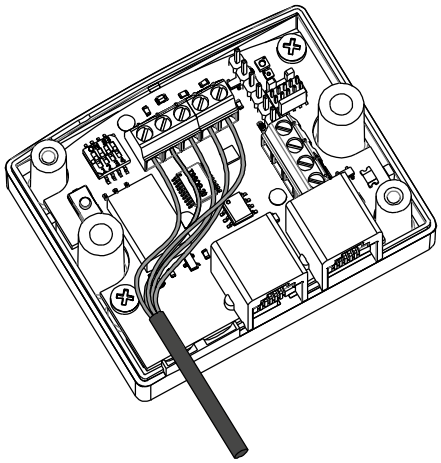
RJ12 CABLE SPECIFICATIONS

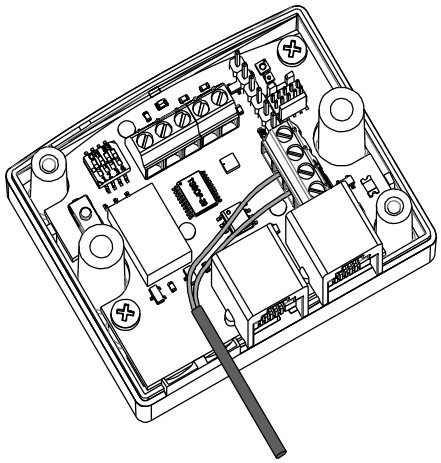


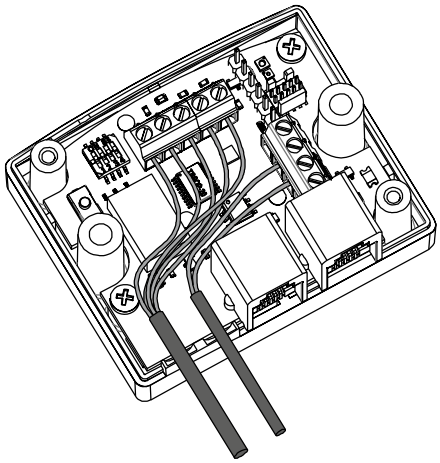
Position 3 and 4 of the RJ12 are not used.

EXAMPLES OF TERMINAL BOARDS CONNECTION





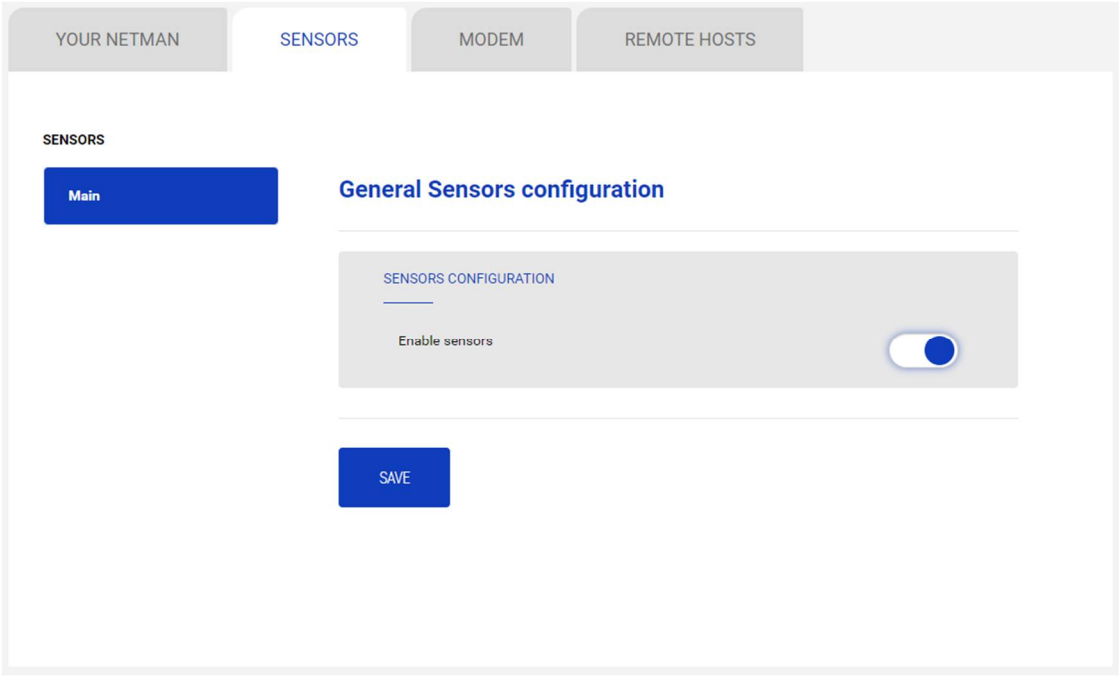




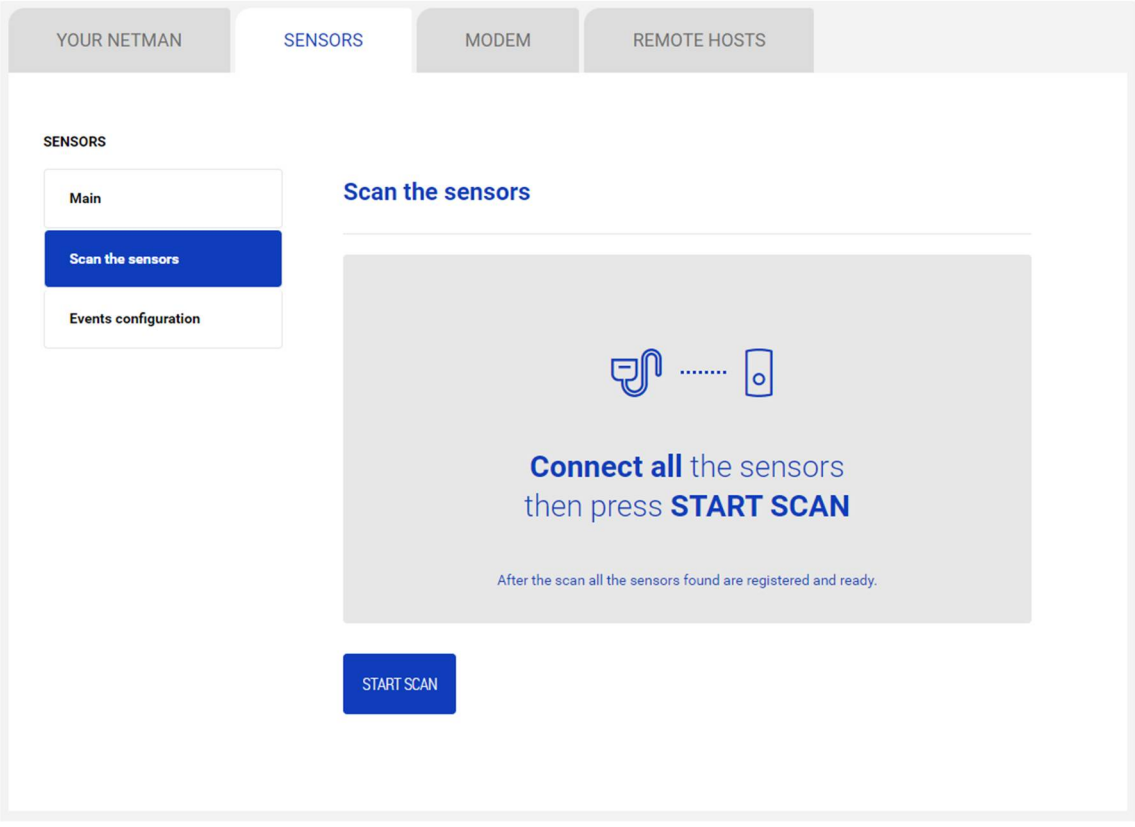
SENSORS DETECTION AND REGISTRATION

First, connect all of the sensors to your *Netman 208.* Open a web browser and log in to the *Netman 208* to access the sensor's configuration interface.

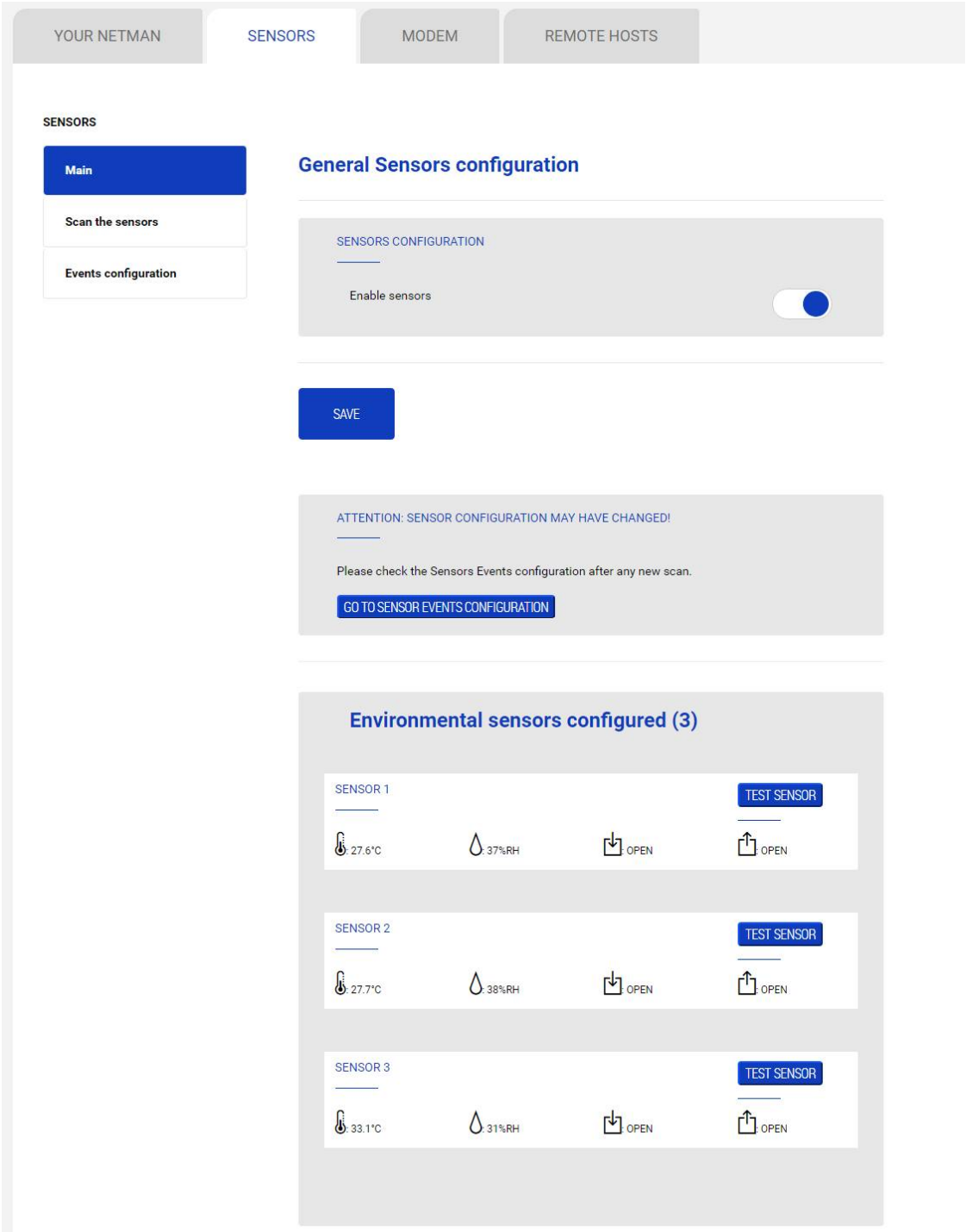
Refer also to the *Netman 208* user manual for further information.



Enable the sensors and press on SAVE. Then, to detect all of the sensors connected to the *Netman 208*, select START SCAN.

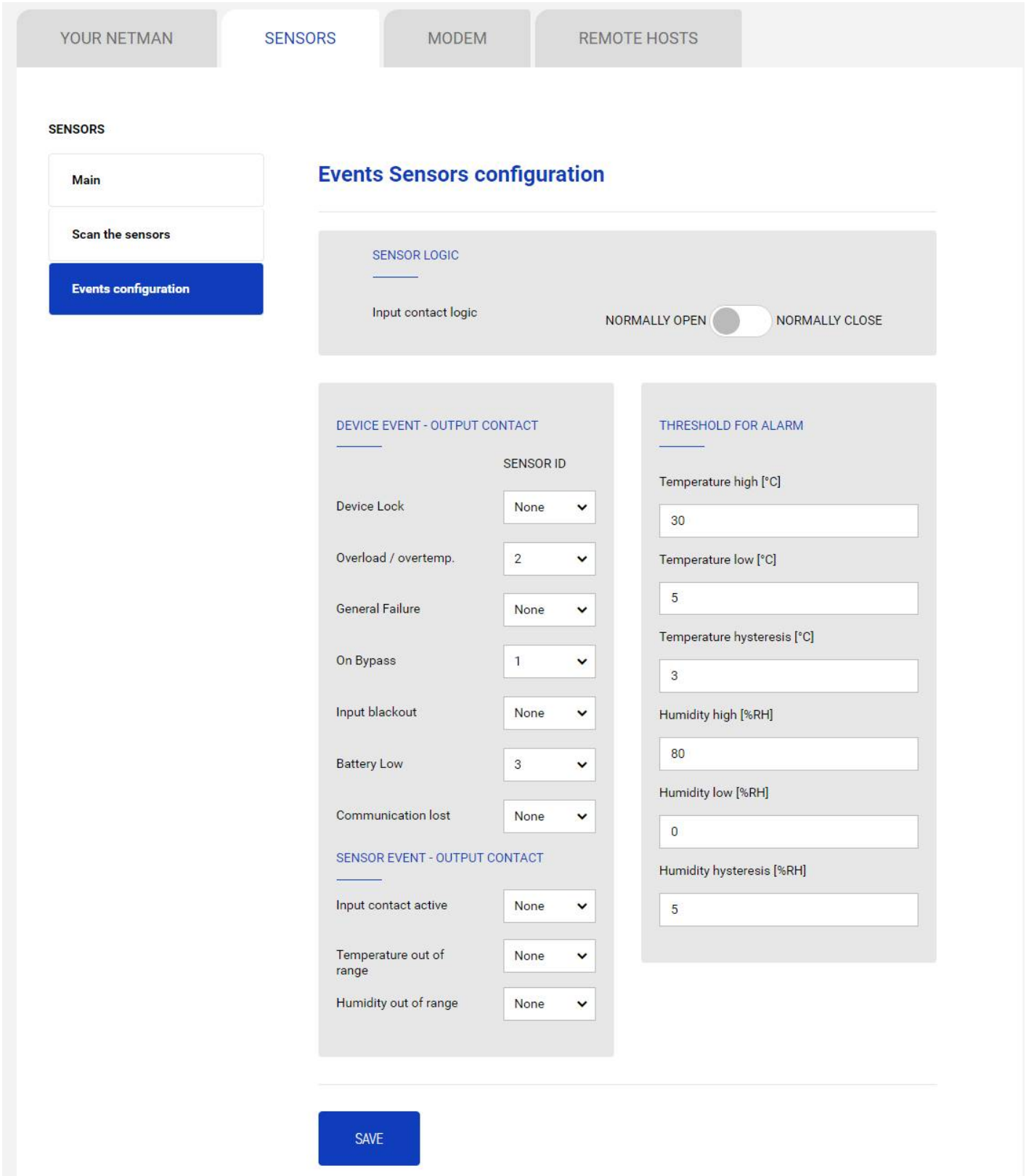


When the sensors are detected, their values are displayed on the Configuration page and in the Dashboard.



After any sensor installation, check the Events configuration page to complete the setup.

EVENTS CONFIGURATION



It is possible to associate the digital output of a sensor to one or more events of the UPS. The output will be closed when the associated event occurs.

Field	DESCRIPTION
Device Lock	UPS is locked
Ovrload/Ovrtemp	UPS in overload or in overtemperature
General Failure	Failure of the UPS
On Bypass	Operation from bypass
Input blackout	Operation from battery
Battery Low	Battery low
Communication lost	Communication between the UPS and the device has been interrupted

It is possible to associate the digital output of a sensor to one or more events of the sensor itself. The output will be closed when the associated event occurs.

Field	DESCRIPTION
Input contact logic	It is possible to select the logic state of the input: • NC: Normally Closed • NO: Normally Open

Field	DESCRIPTION
Input contact active	The state of the input (open/closed) is reported to the output of the selected sensor. The digital input monitored is that with the lowest identification number.
Temperature out of range	The temperature value is higher or lower than configured threshold values.
Humidity out of range	The humidity value is higher or lower than configured threshold values.

Field	DESCRIPTION
Temperature high [°C]	High temperature threshold
Temperature low [°C]	Low temperature threshold
Temperature hysteresis [°C]	Temperature hysteresis to exit the alarm condition.
Humidity high [%RH]	High humidity threshold
Humidity low [%RH]	Low humidity threshold
Humidity hysteresis [%RH]	Humidity hysteresis to exit the alarm condition.

STATUS LED

INDICATION	MEANING
Off	**No power**
Green, flashing	**Running and connection ok with the Netman 208.**
Red	**Netman 208 not configured OR communication error.**
Red, flashing	**Wrong address configuration.**